

SEARCHING FOR SIGNALS IN A COMMUNICATIONS SYSTEM

ABSTRACT OF THE DISCLOSURE

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A method and system enables matched filters of a CDMA system to be simplified using a two stage search. A course stage and a fine stage jointly produce the location(s) of received signal path-rays. In a first stage, an oversampled digital signal is decimated, and the decimated signal is applied to a matched filter to eventually produce an approximate location. In a second stage, the oversampled signal is shifted based on the determined approximate location and then correlated to a generated code, and a more-exact location is selected from the outputs of the correlations. Alternatively, a shifted version of the generated code is correlated to the oversampled signal, and the more-exact location is selected from the outputs of those correlations.